

--ABSTRACT OF THE DISCLOSURE

A data bus arrangement and method for connecting a plurality of nodes to one another through a star coupler arrangement of a data bus which uses a logical decision gate having a plurality of inputs corresponding to said plurality of nodes wherein the logical decision gate inputs receive electrical signals and outputs an electrical signal to be routed back to each of said plurality of nodes. Some of the nodes are connected through opto-electric transducers to the inputs of the logical decision gate. These transducers convert optical input signals from the nodes to electric signals to the inputs of the logical decision gate and also convert the output from the logical decision gate back to optical signals to the nodes. A signal conditioning circuit modifies the output signal of the logical decision gate in a pulse shaping manner in order to compensate for distortion caused by optical to electrical and electric to optical conversions occurring within the opto-electronic transducers.--